Service Schematics

NOKIA
N73

RM-132 / RM-133

Introduction

Important:

This document is intended for use by authorized service centers only.

"Service Schematics" was created with focus on customer care.
The purpose of this document is to provide further technical repair information for NOKIA mobile phones on Level 3/4 service activities.
It contains additional information such as e.g. "Component finder", "Frequency band table" or "Antenna switch table".
The "Signal overview" page gives a good and fast overview about the most important signals and voltages on board.
Saving process time and improving the repair quality is the aim of this document.
It is to be used additionaly to the service manual and other training or service information such as Service Bulletins.

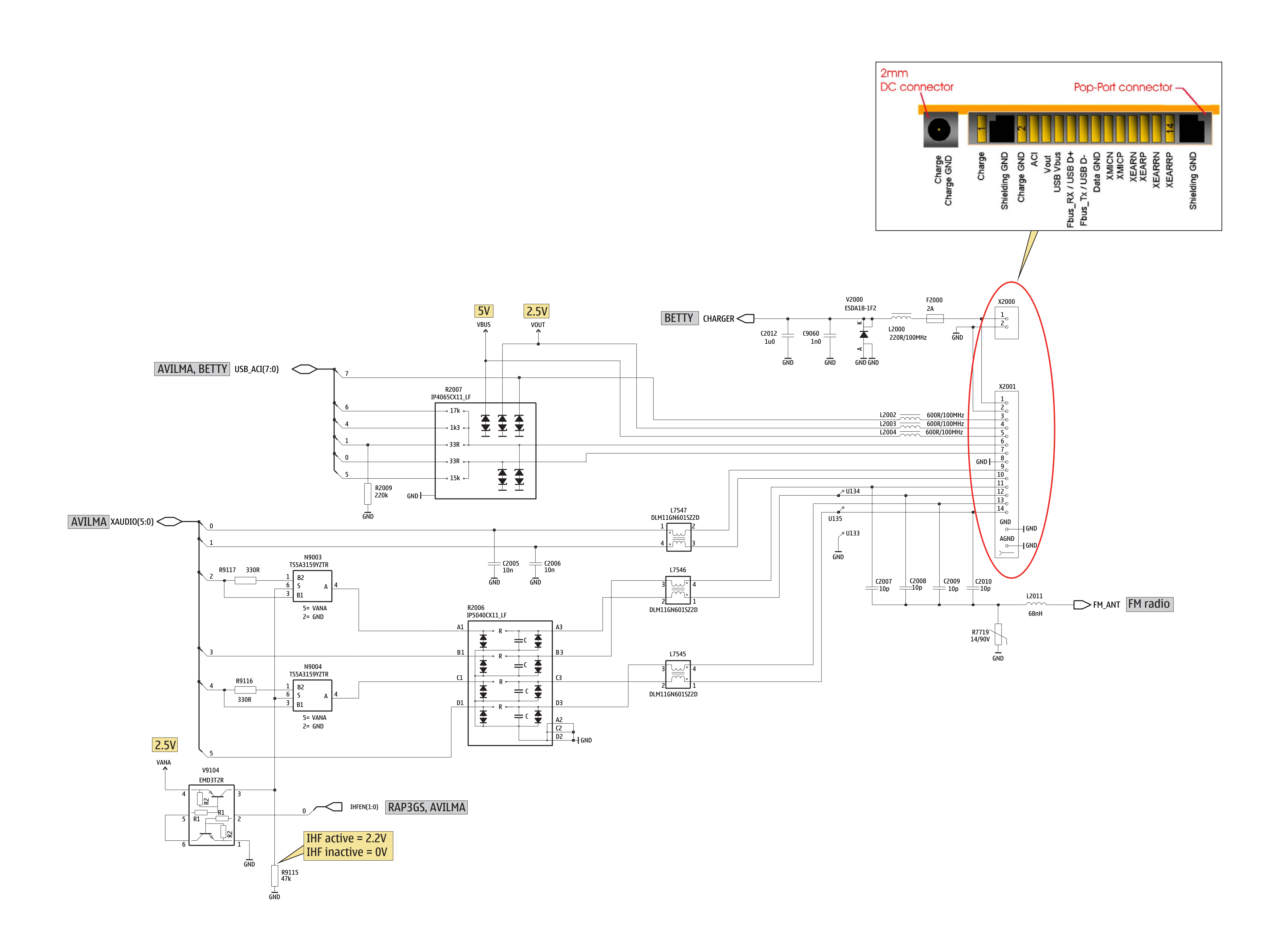
All measurements were made using following equipment:

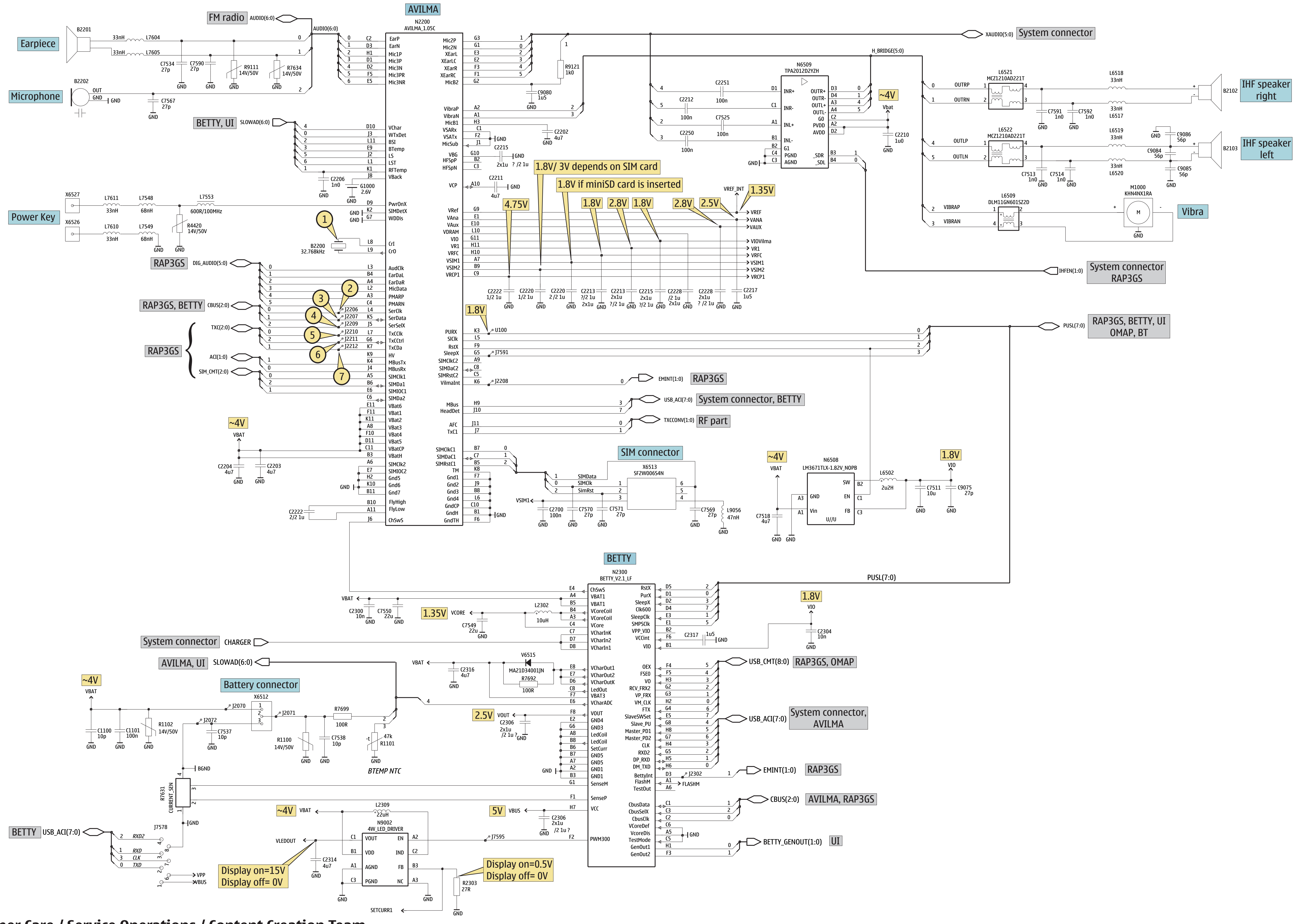
Nokia repair SW	:	Phoenix version 2006.12.7.138
Oscilloscope	:	Fluke PM 3380A/B
Spectrum Analyzer	:	Advanced R3162 with an analog probe
RF-Generator/GSM Tester	:	Rhode & Schwarz CMU 200
Multimeter	:	Fluke 73 Series II

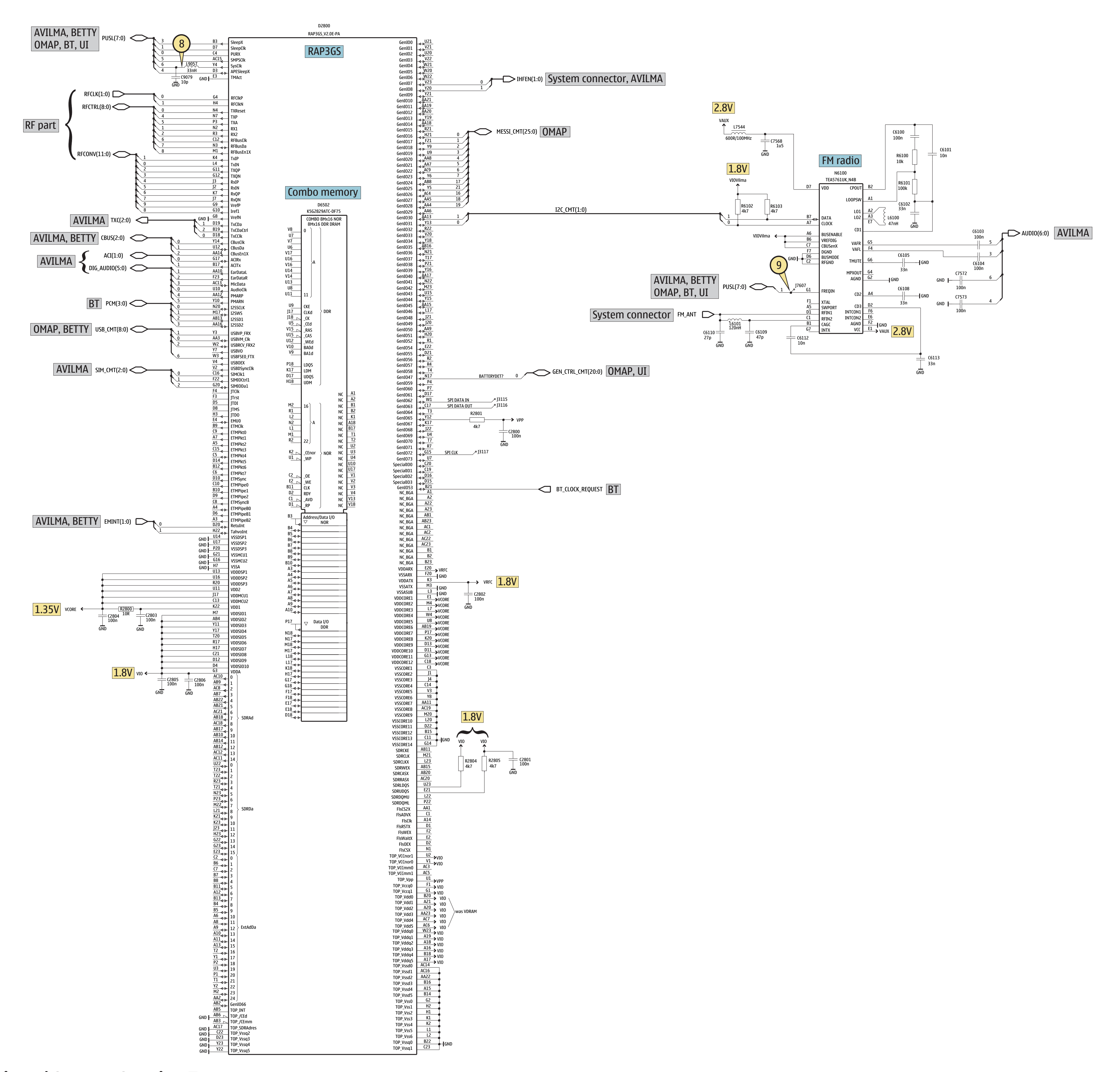
While every endeavour has been made to ensure the accuracy of this document, some errors may exist. If the reader finds any errors, NOKIA shall be notified in writing.

Please send E-Mail to: **training.sace@nokia.com**

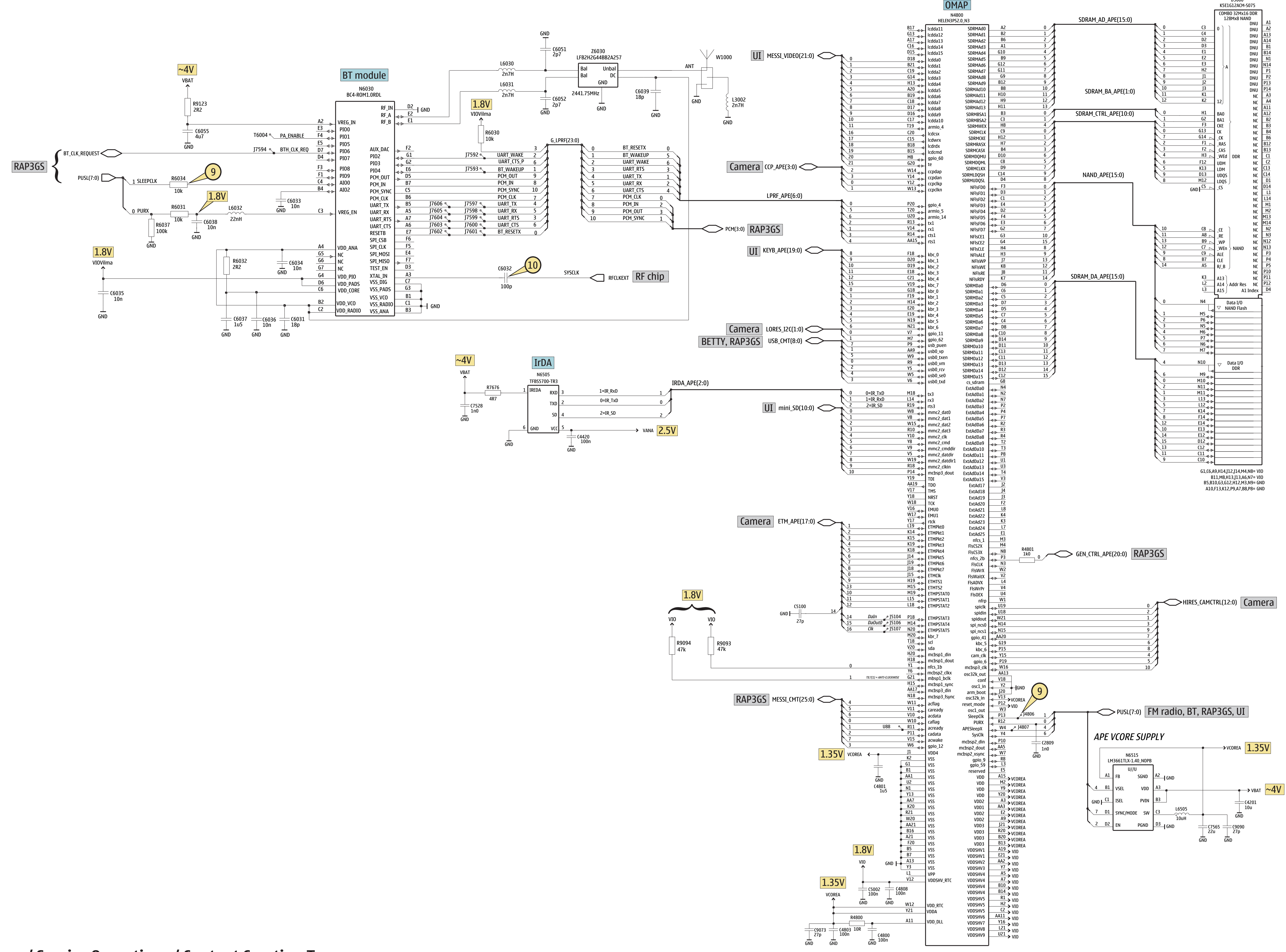
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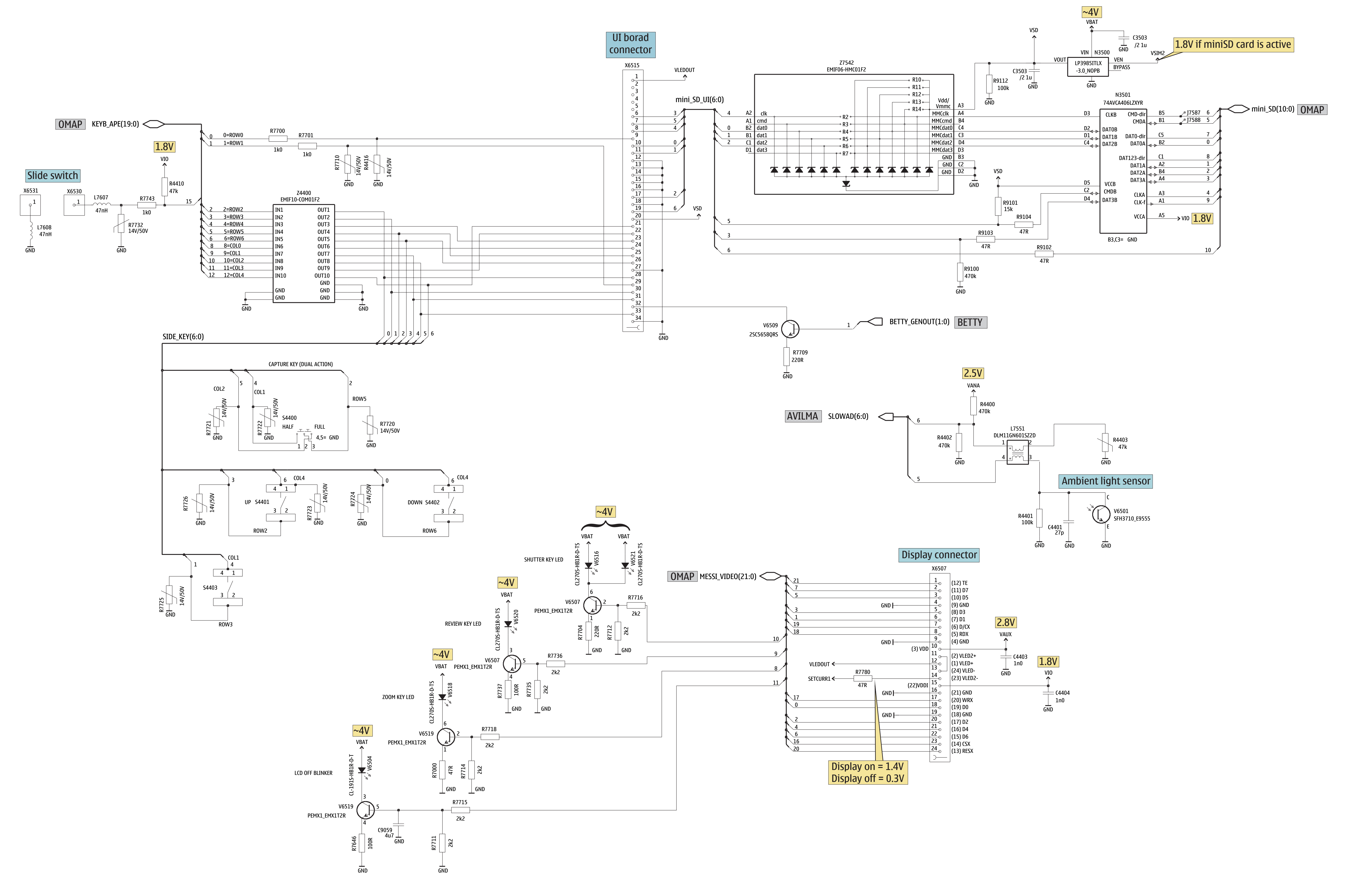

2mm
DC connector
Pop-Port connector
Charge
Charge GND
Charge
Shielding GND
Charge GND
ACI
Vout
USB Vbus
Fbus_RX / USB D+
Fbus_Tx / USB D-
Data GND
XMICN
XMICP
XEARN
XEARP
XEARRN
XEARRP
Shielding GND
5V
2.5V
BETTY
CHARGER
AVILMA, BETTY
USB_ACI(7:0)
AVILMA
XAUDIO(5:0)
FM_ANT
FM radio
2.5V
VANA
IHFEN(1:0)
RAP3GS, AVILMA
IHF active = 2.2V
IHF inactive = 0V

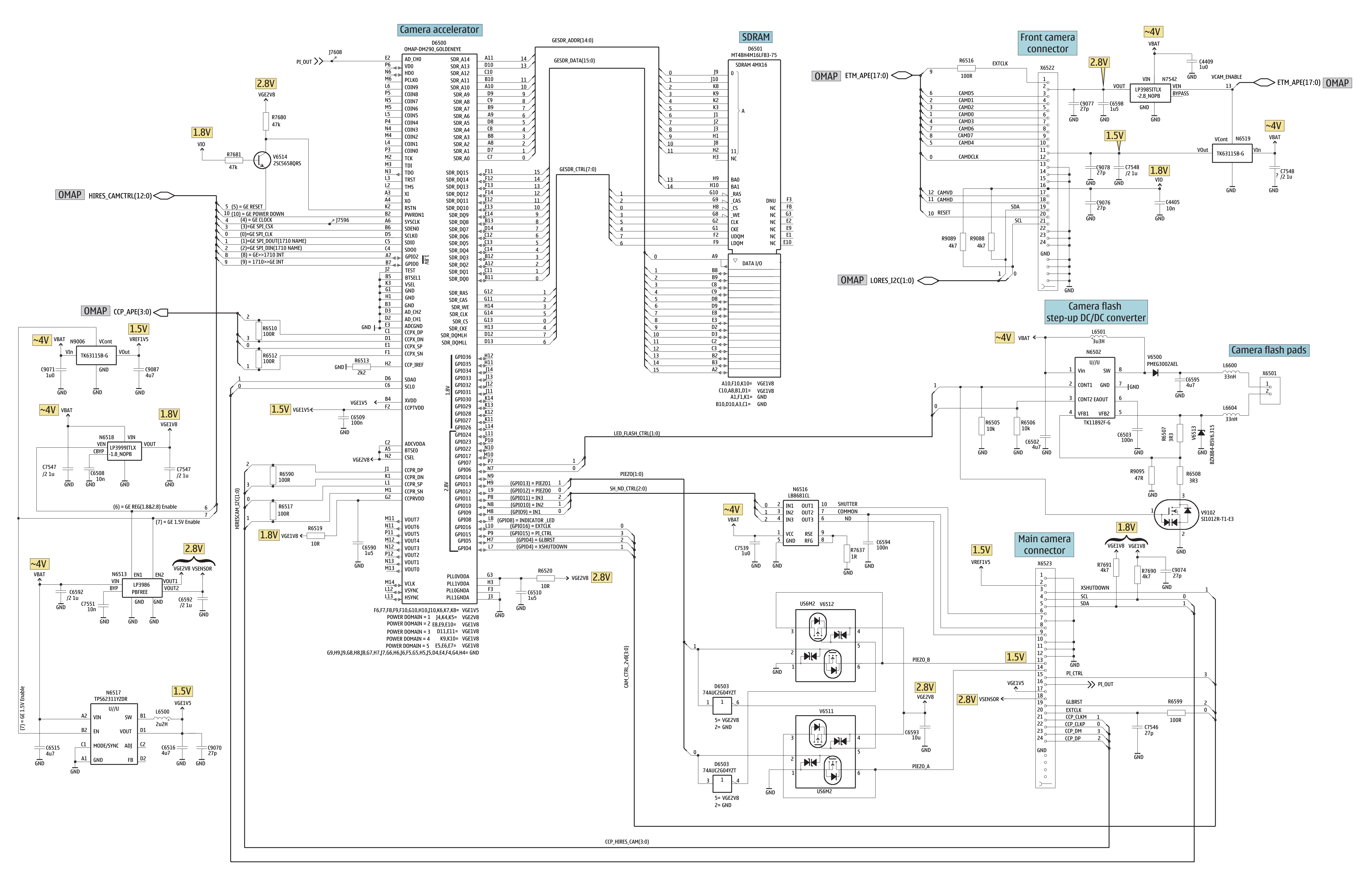

AVILMA
BETTY
FM radio
Earpiece
Microphone
BETTY, UI
Power Key
RAP3GS
RAP3GS, BETTY
System connector
IHF speaker right
IHF speaker left
Vibra
System connector RAP3GS
RAP3GS, BETTY, UI OMAP, BT
SIM connector
1.8V/ 3V depends on SIM card
1.8V if miniSD card is inserted
System connector, BETTY
RF part
AVILMA, UI
Battery connector
RAP3GS, OMAP
System connector, AVILMA
AVILMA, RAP3GS
UI
Display on=15V
Display off= 0V
Display on=0.5V
Display off= 0V
BTEMP NTC

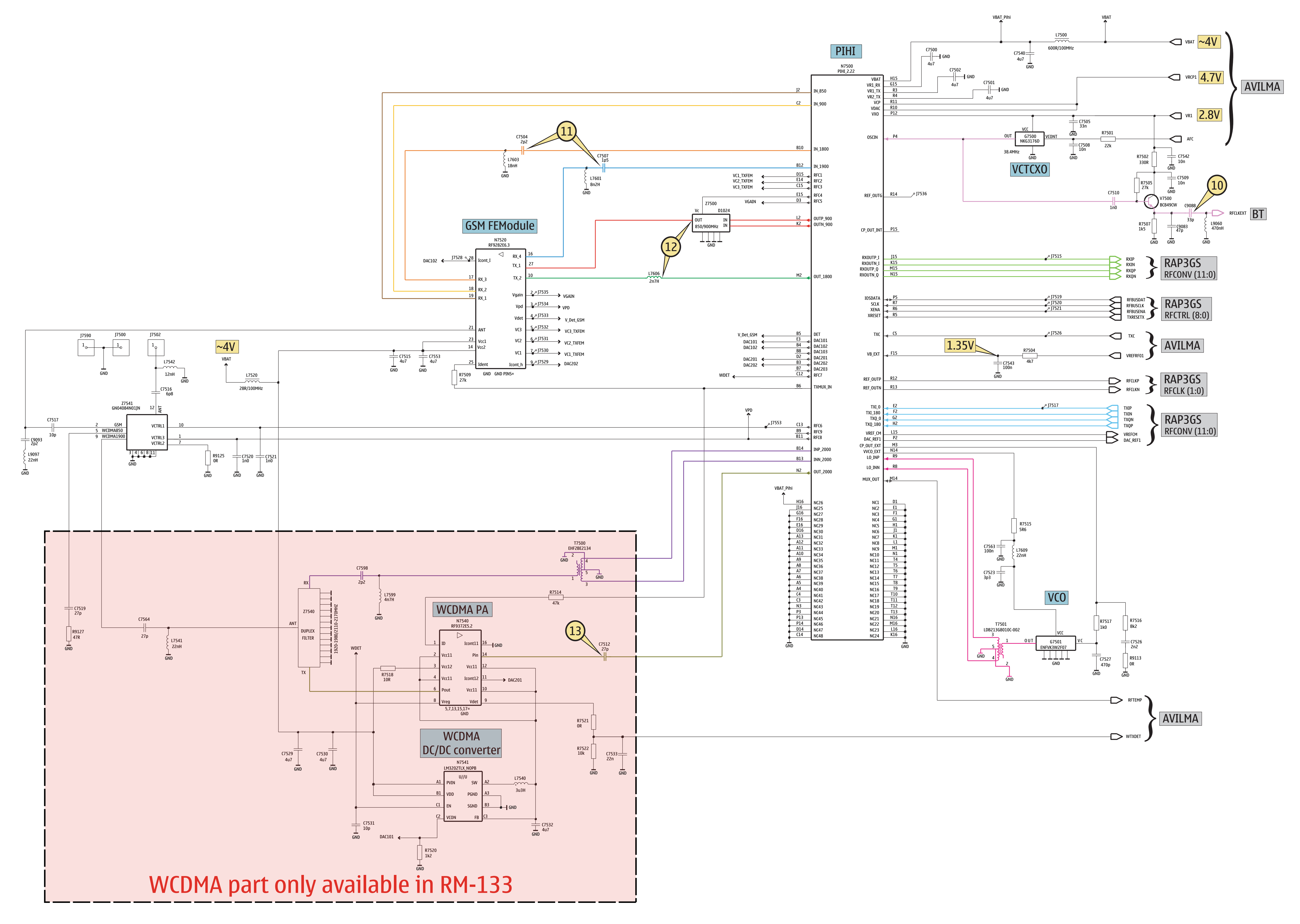


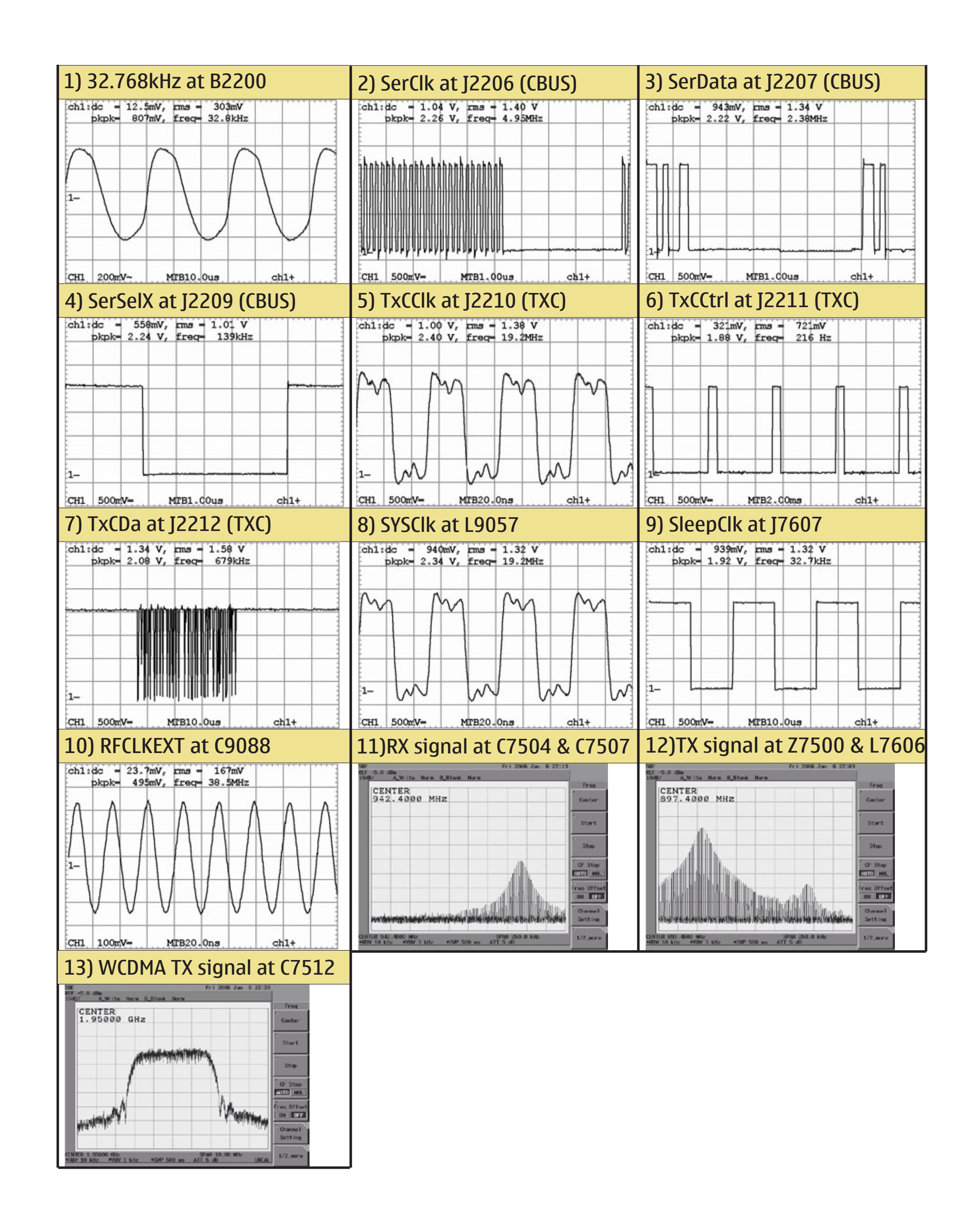
AVILMA, BETTY OMAP, BT, UI
RAP3GS
Combo memory
System connector, AVILMA
OMAP
RF part
AVILMA
AVILMA, BETTY
BT
OMAP, BETTY
OMAP, UI
FM radio
2.8V
1.8V
1.35V
System connector
AUDIO(6:0)


OMAP
BT module
IrDA
RAP3GS
RF chip
UI
Camera
BETTY, RAP3GS
FM radio, BT, RAP3GS, UI
APE VCORE SUPPLY
~4V
1.8V
2.5V
1.35V
SDRAM_AD_APE(15:0)
SDRAM_BA_APE(1:0)
SDRAM_CTRL_APE(10:0)
NAND_APE(15:0)
SDRAM_DA_APE(15:0)
LPRF_APE(6:0)
IRDA_APE(2:0)
HIRES_CAMCTRL(12:0)
GEN_CTRL_APE(20:0)
PUSL(7:0)


UI borad connector
1.8V if miniSD card is active
~4V
OMAP
KEYB_APE(19:0)
1.8V
Slide switch
mini_SD_UI(6:0)
mini_SD(10:0)
BETTY_GENOUT(1:0)
BETTY
SIDE_KEY(6:0)
CAPTURE KEY (DUAL ACTION)
2.5V
AVILMA
SLOWAD(6:0)
Ambient light sensor
Display connector
MESSI_VIDEO(21:0)
SHUTTER KEY LED
REVIEW KEY LED
ZOOM KEY LED
LCD OFF BLINKER
2.8V
Display on = 1.4V
Display off = 0.3V


Camera accelerator
D6500
OMAP-DM290_GOLDENEYE
SDRAM
D6501
MT48H4M16LFB3-75
SDRAM 4MX16
Front camera connector
X6522
Camera flash step-up DC/DC converter
N6502
TK11892F-G
Camera flash pads
X6501
Main camera connector
X6523
OMAP
HIRES_CAMCTRL(12:0)
CCP_APE(3:0)
ETM_APE(17:0)
LORES_I2C(1:0)
GESDR_ADDR(14:0)
GESDR_DATA(15:0)
GESDR_CTRL(7:0)
LED_FLASH_CTRL(1:0)
PIEZO(1:0)
SH_ND_CTRL(2:0)
HIRESCAM_I2C(1:0)
CAM_CTRL_2x8(3:0)
CCP_HIRES_CAM(3:0)
N9006
TK63115B-G
N6518
LP3999ITLX -1.8_NOPB
N6513
LP3986 PBFREE
N6517
TPS62311YZDR
N7542
LP3985ITLX -2.8_NOPB
N6519
TK63115B-G
N6516
LB8681CL
V6512
V6511
US6M2
D6503
74AUC2G04YZT
V9102
SI1012R-T1-E3
V6500
PMEG3002AEL
V6514
2SC5658QRS
~4V
2.8V
1.8V
1.5V
VBAT
VIO
VGE2V8
VGE1V8
VGE1V5
VREF1V5
VSENSOR
GND
PI_OUT
PIEZO_A
PIEZO_B
SHUTTER
COMMON
ND
(6) = GE REG(1.8&2.8) Enable
(7) = GE 1.5V Enable
(7) = GE 1.5V Enable


PIHI
N7500
AVILMA
~4V
4.7V
2.8V
VCTCXO
BT
GSM FEModule
RAP3GS
RFCONV (11:0)
RFCTRL (8:0)
1.35V
RFCLK (1:0)
~4V
VCO
WCDMA PA
WCDMA
DC/DC converter
WCDMA part only available in RM-133



VBAT
VREFRF01=1.35V
VIO=1.8V
VR1=2.8V
VCORE=1.35V
PURX=1.8V
VIOVILMA=1.8V
VRFC=1.8V
VR1=2.8V
VAUX=2.8V
VANA=2.5V
VBAT
PURX=1.8V
VAUX=2.8V
VBAT
VANA=2.8V
VBUS=5V
VOUT=2.5V

B		C6112	B3	C9073	C10	L6519	G16	R4402	D5	R7743	B5
B2200	C5	C6113	A3	C9074	C16	L6520	G16	R4403	F20	R7780	A8
C		C6502	B16	C9075	D14	L6521	E3	R4410	C5	R9088	H11
C1100	H15	C6503	B17	C9076	H11	L6522	F3	R4416	B10	R9089	H11
C1101	H15	C6508	E13	C9077	I12	L7544	C3	R4420	F20	R9093	F8
C2005	F3	C6509	C13	C9078	H13	L7545	G2	R4800	E8	R9094	D8
C2006	F3	C6510	B13	C9079	F10	L7546	F2	R4801	F10	R9095	B18
C2007	F2	C6515	B13	C9080	B4	L7547	F2	R6030	C7	R9100	C11
C2008	F2	C6516	C13	C9083	H13	L7548	F20	R6031	B6	R9101	C11
C2009	G2	C6590	D13	C9084	G17	L7549	F20	R6032	C7	R9102	C11
C2010	G2	C6592	B14	C9085	G16	L7551	E20	R6034	B7	R9103	C11
C2012	C4	C6593	C15	C9086	H16	L7553	B18	R6037	A6	R9104	B11
C2202	C4	C6594	A16	C9087	B16	L7599	H18	R6100	B3	R9111	E20
C2203	B6	C6595	B17	C9088	G13	L7601	I17	R6101	B3	R9112	A10
C2204	A4	C6598	I12	C9090	A13	L7603	I17	R6102	C3	R9113	H14
C2206	C4	C7500	I17	C9093	C19	L7604	D19	R6103	C3	R9115	G3
C2210	E3	C7501	G15	D		L7605	D20	R6505	A18	R9116	G3
C2211	A5	C7502	G15	D2800	H9	L7606	I18	R6506	A17	R9117	F3
C2212	D3	C7504	I17	D5000	E7	L7607	B5	R6507	B17	R9121	B4
C2213	C6	C7505	G14	D6500	D11	L7608	A5	R6508	A17	R9123	B7
C2215	B6	C7507	I17	D6501	F11	L7609	I13	R6510	E12	R9125	C19
C2217	B4	C7508	H14	D6502	H9	L7610	F20	R6512	D12	R9127	C19
C2220	A4	C7509	H13	D6503	B15	L7611	F20	R6513	E12	S	
C2222	A5	C7510	G14	F		L9056	E6	R6516	G11	S4400	I4
C2228	B6	C7511	D14	F2000	C3	L9057	F10	R6517	D12	S4401	I15
C2250	D3	C7512	A18	G		L9060	G13	R6519	D13	S4402	I16
C2251	D3	C7513	F3	G1000	B15	L9097	C19	R6520	B13	S4403	I7
C2300	G7	C7514	F3	G7500	G14	L6600	C17	R6590	D12	T	
C2304	F7	C7515	G19	G7501	I14	L6604	B17	R6599	C12	T7500	H17
C2306	G5	C7516	C19	J		L7500	I16	R7000	F14	T7501	H15
C2314	H7	C7517	C19	J2206	D4	L7520	G19	R7501	H15	V	
C2316	H6	C7518	D13	J2207	D4	L7540	B18	R7502	H13	V2000	C4
C2317	G5	C7519	C19	J2208	D5	L7541	B20	R7504	I17	V6500	B16
C2700	D5	C7520	C19	J2209	D4	L7542	C20	R7505	H13	V6501	F21
C2800	F10	C7521	C19	J2210	D5	M		R7507	G13	V6504	G21
C2801	F9	C7523	I14	J2211	D5	M1000	B3	R7509	G18	V6507	H3
C2802	H8	C7525	D3	J2212	D5	N		R7514	C18	V6509	C12
C2803	H8	C7526	H14	J2302	F5	N2200	B5	R7515	I15	V6511	B15
C2804	G8	C7527	H14	J4806	G5	N2300	G6	R7516	H14	V6512	C15
C2805	F10	C7528	B16	J4807	A15	N3500	C9	R7517	H14	V6513	B18
C2806	H8	C7529	A18	J7526	H16	N3501	C10	R7518	C19	V6514	C13
C2809	F9	C7530	B18	J7528	G18	N4800	E9	R7520	A17	V6515	H6
C3503	B9	C7531	B19	J7529	I18	N6030	B7	R7521	A19	V6516	I5
C4201	B14	C7532	B18	J7530	H18	N6100	B3	R7522	A20	V6518	H16
C4401	F20	C7533	A20	J7531	H18	N6502	A17	R7634	E20	V6519	F15
C4403	C9	C7534	D19	J7532	H18	N6505	A16	R7637	A16	V6520	I8
C4404	C8	C7537	E15	J7533	H18	N6508	E13	R7646	E15	V6521	I3
C4405	G11	C7538	G16	J7534	H18	N6509	E3	R7676	B16	V7500	G14
C4409	I11	C7539	B15	J7535	G18	N6513	C14	R7680	C13	V9102	A18
C4420	A15	C7540	I16	J7536	I15	N6515	B14	R7681	C13	V9104	G2
C4800	E8	C7542	H13	J7553	H16	N6516	B15	R7690	B16	W	
C4801	F9	C7543	I17	J7591	D4	N6517	B13	R7691	C16	W1000	A3
C4803	C10	C7546	C12	J7594	C6	N6518	E13	R7692	H5	X	
C4808	F10	C7547	E13	J7607	B2	N6519	F14	R7699	G16	X1000	I3
C5002	F6	C7548	F14	U100	D4	N7500	H16	R7700	B10	X2001	E1
C5100	C10	C7549	F7	U88	H8	N7520	H19	R7701	A10	X6501	B17
C6031	B7	C7550	G7	L		N7540	B19	R7704	I3	X6507	B9
C6032	B7	C7551	C14	L2000	C3	N7541	B18	R7709	B12	X6512	F15
C6033	B7	C7553	I19	L2002	E3	N7542	I12	R7710	A10	X6513	D5
C6034	A7	C7563	I15	L2003	E2	N9002	H7	R7711	E15	X6515	B11
C6035	C6	C7564	B20	L2004	E2	N9003	F3	R7712	I2	X6522	H12
C6036	C7	C7565	A14	L2011	G2	N9004	G3	R7714	F15	X6523	B16
C6037	C7	C7567	D3	L2302	G8	N9006	B16	R7715	E15	X6526	F21
C6038	B6	C7568	B3	L2309	H6	R		R7716	I2	X6527	F21
C6039	A6	C7569	E5	L3002	A4	R1100	G16	R7718	F14	X6530	B6
C6051	B7	C7570	D4	L6030	B7	R1101	E5	R7719	G2	X6531	A5
C6052	B7	C7571	D5	L6031	B7	R1102	H15	R7720	H5	X9006	I20
C6055	A7	C7572	B3	L6032	B6	R2006	G2	R7721	I5	X9007	F20
C6100	A3	C7573	C4	L6100	B3	R2007	E3	R7722	H3	X9008	D20
C6101	A3	C7590	D20	L6101	A2	R2009	G5	R7723	I15	Z	
C6102	A3	C7591	F3	L6500	C14	R2303	H7	R7724	I15	Z4400	B10
C6103	A3	C7592	F3	L6501	B16	R2800	H8	R7725	I7	Z6030	A7
C6104	A3	C7598	H18	L6502	E14	R2801	F10	R7726	I15	Z7500	H17
C6105	C2	C9059	E15	L6505	B13	R2804	G8	R7732	B6	Z7540	B20
C6108	C3	C9060	C4	L6509	B4	R2805	H8	R7735	I2	Z7541	C19
C6109	A2	C9070	C13	L6517	G3	R4400	D5	R7736	I2	Z7542	C11
C6110	B2	C9071	A16	L6518	F3	R4401	F20	R7737	H2		

